

What is claimed is:

1. An organic electroluminescent element comprising at least a light emitting layer containing an organic light emitting material placed between an anode and a cathode, wherein the element has, between the anode and the light emitting layer, at least a hole transporting layer containing a hole transporting material and an acceptor, and an electron injection restraining layer restraining the injection of electrons from the light emitting layer into the hole transporting layer, from the anode side, and/or, between the light emitting layer and the cathode, at least an electron transporting layer containing an electron transporting material and a donor, and a hole injection restraining layer restraining the injection of holes from the light emitting layer into the electron transporting layer, from the cathode side.

2. An organic electroluminescent element according to claim 1 wherein the electron injection restraining layer and the light emitting layer are constituted by materials meeting the following formula (1)

$$|Ea^{(A)}| \geq |Ea^{(EBL)}| \text{ and } |Ea^{(EM)}| \geq |Ea^{(EBL)}| \quad (1)$$

wherein  $Ea^{(A)}$  represents the electron affinity of an acceptor,  $Ea^{(EBL)}$  represents the electron affinity of a material constituting the electron injection restraining layer, and  $Ea^{(EM)}$  represents the electron affinity of a material

constituting the light emitting layer.

2. *x*. An organic electroluminescent element according to claim 1 wherein the hole injection restraining layer and the light emitting layer are constituted by materials meeting the following formula (2)

$$|Ip^{(D)}| \leq |Ip^{(HBL)}| \text{ and } |Ip^{(EM)}| \leq |Ip^{(HBL)}| \quad (2)$$

wherein,  $Ip^{(D)}$  represents the ionization potential of a donor,  $Ip^{(HBL)}$  represents the ionization potential of a material constituting the hole injection restraining layer, and  $Ip^{(EM)}$  represents the ionization potential of a material constituting the light emitting layer.

3. *A*. An organic electroluminescent element according to claim 1 wherein the electron injection restraining layer is constituted by the hole transporting material.

4. *B*. An organic electroluminescent element according to claim 1 wherein the hole injection restraining layer is constituted by the electron transporting material.

5. *C*. An organic electroluminescent element according to claim 1 wherein the thickness of the electron injection restraining layer is thinner than 30 nm.

6. *D*. An organic electroluminescent element according to claim 1 wherein the thickness of the hole injection restraining layer is thinner than 30 nm.

7. *E*. An organic electroluminescent element according to claim 1 wherein the acceptor is a compound having a cyano group.

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8. A. An organic electroluminescent element according to claim 1 wherein the donor is a compound having an aromatic tertiary amine as the skeleton or a condensed polycyclic compound.

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10. An organic electroluminescent element according to claim 1 wherein the organic electroluminescent element are selected from following constitutions:

- (1) anode/hole transporting layer/electron injection restraining layer/light emitting layer/cathode,
- (2) anode/hole transporting layer/electron injection restraining layer/light emitting layer/electron transporting layer/cathode,
- (3) anode/light emitting layer/hole injection restraining layer/electron transporting layer/cathode,
- (4) anode/hole transporting layer/light emitting layer/hole injection restraining layer/electron transporting layer/cathode and
- (5) anode/hole transporting layer/electron injection restraining layer/light emitting layer/hole injection restraining layer/electron transporting layer/cathode.

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10 11. A method of producing the organic electroluminescent element described in claim 1 comprising forming each of the anode, the hole transporting layer, the electron injection restraining layer, the light emitting layer, the hole injection

restraining layer, the electron transporting layer, and the cathode by a vacuum film-forming method.

Added A 4